

217/785-1705

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) -- NESHAP SOURCE

PERMITTEE

Eagle Electronics, Inc.
Attn: Mike Kalaia
1735 Mitchell Boulevard
Schaumburg, Illinois 60193

<u>Application No.:</u> 96010123	<u>I.D. No.:</u> 031282ACH
<u>Applicant's Designation:</u>	<u>Date Received:</u> June 3, 2011
<u>Subject:</u> Printed Circuit Board Manufacture	
<u>Date Issued:</u>	<u>Expiration Date:</u>
<u>Location:</u> 1735 Mitchell Boulevard, Schaumburg, Cook County, 60193	

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of:

Image Processes	Dry film laminators with exposure and development
Plating Processes	Various electroplating and electroless plating processes and black hole line - also may include some experimental plating-type processes. Exhaust to fume scrubber. Metals: Copper, Tin, Nickel & Gold
Etching Processes	Alkaline-based etching including hot air leveling. Exhaust to fume scrubber.
Screen Printing Processes	Auto and manual screen printing lines with electric thermal and UV ovens. Exhaust to fume scrubber. LPI inks & screen wash
Multi-Layer Processes	Multi-layer line plus Desmear Line and Black Oxide Line. Exhaust to fume scrubber.
Fume Scrubber	High efficiency wet scrubber

pursuant to the above-referenced application. This permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued:
 - i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for Volatile Organic Material (VOM), 10 tons/year for any single Hazardous Air Pollutant (HAP) and 25 tons/year for any combination of such HAPs). As a result, the source is excluded from the requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit are described in Attachment A.
 - ii. To limit the potential emissions of VOM from the source to less than 25 tons/year. As a result, the source is excluded from the requirements of 35 Ill. Adm. Code Part 205 (Emissions Reduction Market System). The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.

- iii. To establish federally enforceable production and operating limitations, which restrict the potential to emit for VOM to less than 25 tons per year so that the source is not subject to the requirements of 35 Ill. Adm. Code Part 218 Subpart TT (Other Emission Units).
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permit(s) for this location.
- 2a. The nickel/gold electroplating line is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Source Standards for Plating and Polishing Operations, 40 CFR 63 Subparts A and WWWW. The Illinois EPA is administering the NESHAP in Illinois on behalf of the United States EPA under a delegation agreement. Pursuant to 40 CFR 63.11504(a), you are subject to 40 CFR 63 Subpart WWWW if you own or operate a plating and polishing facility that is an area source of hazardous air pollutant (HAP) emissions and meets the criteria specified in 40 CFR 63.11504(a)(1) through (3).
 - i. A plating and polishing facility is a plant site that is engaged in one or more of the processes listed in 40 CFR 63.11504(a)(1)(i) through (vi).
 - A. Electroplating other than chromium electroplating (i.e., non-chromium electroplating).
 - B. Electroless or non-electrolytic plating.
 - C. Other non-electrolytic metal coating processes, such as chromate conversion coating, nickel acetate sealing, sodium dichromate sealing, and manganese phosphate coating; and thermal spraying.
 - D. Dry mechanical polishing of finished metals and formed products after plating or thermal spraying.
 - E. Electroforming.
 - F. Electropolishing.
 - ii. A plating or polishing facility is an area source of HAP emissions, where an area source is any stationary source or group of stationary sources within a contiguous area under common control that does not have the potential to emit any single HAP at a rate of 9.07 megagrams per year (Mg/yr) (10 tons per year (tpy)) or more and any combination of HAP at a rate of 22.68 Mg/yr (25 tpy) or more.
 - iii. Your plating and polishing facility uses or has emissions of compounds of one or more plating and polishing metal HAP, which means any compound of any of the following metals: cadmium,

chromium, lead, manganese, and nickel, as defined in 40 CFR 63.11511, "What definitions apply to this subpart?" With the exception of lead, plating and polishing metal HAP also include any of these metals in the elemental form.

- b. Pursuant to 40 CFR 63.11507(a), if you own or operate an affected new or existing non-cyanide electroplating, electroforming, or electropolishing tank (hereafter referred to as an "electrolytic" process tank, as defined in 40 CFR 63.11511, "What definitions apply to this subpart?") that contains one or more of the plating and polishing metal HAP and operates at a pH of less than 12, you must comply with the requirements in 40 CFR 63.11507(a)(1), (2), or (3), and implement the applicable management practices in 40 CFR 63.11507(g), as practicable.
 - i. You must capture and exhaust emissions from the affected tank to any one of the following emission control devices: composite mesh pad, packed bed scrubber, or mesh pad mist eliminator, according to 40 CFR 63.11507(a)(2)(i) and (ii).
 - A. You must operate all capture and control devices according to the manufacturer's specifications and operating instructions.
 - B. You must keep the manufacturer's specifications and operating instructions at the facility at all times in a location where they can be easily accessed by the operators.
 - ii. You must cover the tank surface according to 40 CFR 63.11507(a)(3)(i) or (ii).
 - A. For batch electrolytic process tanks, as defined in 40 CFR 63.11511, "What definitions apply to this subpart?", you must use a tank cover, as defined in 40 CFR 63.11511, over all of the effective surface area of the tank for at least 95 percent of the electrolytic process operating time.
 - B. For continuous electrolytic process tanks, as defined in 40 CFR 63.11511, "What definitions apply to this subpart?", you must cover at least 75 percent of the surface of the tank, as defined in 40 CFR 63.11511, whenever the electrolytic process tank is in operation.
- 3a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.
- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a

period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.

- c. Pursuant to 35 Ill. Adm. Code 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
- d. Pursuant to 35 Ill. Adm. Code 212.321(a), except as further provided in 35 Ill. Adm. Code Part 212, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.321(c).
- 4. Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 Ill. Adm. Code 218.302, 218.303, or 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code Part 218 Subpart G (Use of Organic Material) shall only apply to photochemically reactive material.
- 5. Pursuant to 35 Ill. Adm. Code 212.314, 35 Ill. Adm. Code 212.301 shall not apply and spraying pursuant to 35 Ill. Adm. Code 212.304 through 212.310 and 35 Ill. Adm. Code 212.312 shall not be required when the wind speed is greater than 40.2 km/hr (25 mph). Determination of wind speed for the purposes of this rule shall be by a one-hour average or hourly recorded value at the nearest official station of the U.S. Weather Bureau or by wind speed instruments operated on the site. In cases where the duration of operations subject to this rule is less than one hour, wind speed may be averaged over the duration of the operations on the basis of on-site wind speed instrument measurements.
- 6a. This permit is issued based on the solvent cleaning operations at this source not being subject to 35 Ill. Adm. Code 218.187 (Other Industrial Solvent Cleaning Operations). Pursuant to 35 Ill. Adm. Code 218.187(a)(1), on and after January 1, 2012: Except as provided in 35 Ill. Adm. Code 218.187(a)(2), the requirements of 35 Ill. Adm. Code 218.187 shall apply to all cleaning operations which use organic materials at sources that emit a total of 226.8 kg per calendar month (500 lbs per calendar month) or more of VOM, in the absence of air pollution control equipment, from cleaning operations at the source other than cleaning operations identified in 35 Ill. Adm. Code 218.187(a)(2). For purposes of 35 Ill. Adm. Code 218.187, "cleaning

operation" means the process of cleaning products, product components, tools, equipment, or general work areas during production, repair, maintenance, or servicing, including but not limited to spray gun cleaning, spray booth cleaning, large and small manufactured components cleaning, parts cleaning, equipment cleaning, line cleaning, floor cleaning, and tank cleaning, at sources with emission units.

- b. This permit is issued based on the screen printing and multi-layer processes not being subject to 35 Ill. Adm. Code Part 218 Subpart TT (Other Emission Units). This is a result of the federally enforceable production and operating limitations, which restrict the potential to emit for VOM from this source to less than 25 tons per year.
- 7a. Pursuant to 40 CFR 63.11507(g), if you own or operate an affected new or existing plating and polishing process unit that contains, applies, or emits one or more of the plating and polishing metal HAP, you must implement the applicable management practices in 40 CFR 63.11507(g) (1) through (12), as practicable.
 - i. Minimize bath agitation when removing any parts processed in the tank, as practicable except when necessary to meet part quality requirements.
 - ii. Maximize the draining of bath solution back into the tank, as practicable, by extending drip time when removing parts from the tank; using drain boards (also known as drip shields); or withdrawing parts slowly from the tank, as practicable.
 - iii. Optimize the design of barrels, racks, and parts to minimize dragout of bath solution (such as by using slotted barrels and tilted racks, or by designing parts with flow-through holes to allow the tank solution to drip back into the tank), as practicable.
 - iv. Use tank covers, if already owned and available at the facility, whenever practicable.
 - v. Minimize or reduce heating of process tanks, as practicable (e.g., when doing so would not interrupt production or adversely affect part quality).
 - vi. Perform regular repair, maintenance, and preventive maintenance of racks, barrels, and other equipment associated with affected sources, as practicable.
 - vii. Minimize bath contamination, such as through the prevention or quick recovery of dropped parts, use of distilled/de-ionized water, water filtration, pre-cleaning of parts to be plated, and thorough rinsing of pre-treated parts to be plated, as practicable.
 - viii. Maintain quality control of chemicals, and chemical and other bath ingredient concentrations in the tanks, as practicable.

- ix. Perform general good housekeeping, such as regular sweeping or vacuuming, if needed, and periodic washdowns, as practicable.
 - x. Minimize spills and overflow of tanks, as practicable.
 - xi. Perform regular inspections to identify leaks and other opportunities for pollution prevention.
- b. Pursuant to 40 CFR 63.11508(a), if you own or operate an affected source, you must submit a Notification of Compliance Status in accordance with 40 CFR 63.11509(b) of "What are my notification, reporting, and recordkeeping requirements?"
- c. Pursuant to 40 CFR 63.11508(b), you must be in compliance with the applicable management practices and equipment standards in 40 CFR 63 Subpart WWWW at all times.
- d. Pursuant to 40 CFR 63.11508(c), to demonstrate initial compliance, you must satisfy the requirements specified in 40 CFR 63.11508(c)(1) through (11).
- i. If you own or operate an affected electroplating, electroforming, or electropolishing tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in 40 CFR 63.11507(a), "What are my standards and management practices?", and you use a control system, as defined in 40 CFR 63.11511, "What definitions apply to this subpart?", to comply with 40 CFR 63 Subpart WWWW, you must demonstrate initial compliance according to 40 CFR 63.11508(c)(2)(i) through (v).
 - A. You must install a control system designed to capture emissions from the affected tank and exhaust them to a composite mesh pad, packed bed scrubber, or mesh pad mist eliminator.
 - B. You must state in your Notification of Compliance Status that you have installed the control system according to the manufacturer's specifications and instructions.
 - C. You must implement the applicable management practices specified in 40 CFR 63.11507(g), "What are my standards and management practices?", as practicable.
 - D. You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in 40 CFR 63.11507(g), "What are my standards and management practices?", as practicable.
 - E. You must follow the manufacturer's specifications and operating instructions for the control systems at all times.

- ii. If you own or operate an affected batch electrolytic process tank, as defined in 40 CFR 63.11511, "What definitions apply to this subpart?" that contains one or more of the plating and polishing metal HAP and which is subject to the requirements in 40 CFR 63.11507(a), "What are my standards and management practices?" and you use a tank cover, as defined in 40 CFR 63.11511, to comply with 40 CFR 63.11507(a), (b) or (c), you must demonstrate initial compliance according to 40 CFR 63.11508(c)(3)(i) through (iv).
 - A. You must install a tank cover on the affected tank.
 - B. You must state in your Notification of Compliance Status that you operate the tank with the cover in place at least 95 percent of the electrolytic process operating time.
 - C. You must implement the applicable management practices specified in 40 CFR 63.11507(g), "What are my standards and management practices?", as practicable.
 - D. You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in 40 CFR 63.11507(g), "What are my standards and management practices?", as practicable.
- iii. If you own or operate an affected continuous electrolytic process tank, as defined in 40 CFR 63.11511, "What definitions apply to this subpart?" that contains one or more of the plating and polishing metal HAP and is subject to the requirements in 40 CFR 63.11507(a), "What are my standards and management practices?" and you cover the tank surface to comply with 40 CFR 63.11507(a), (b) or (c), you must demonstrate initial compliance according to 40 CFR 63.11508(c)(4)(i) through (iv).
 - A. You must cover at least 75 percent of the surface area of the affected tank.
 - B. You must state in your Notification of Compliance Status that you operate the tank with the surface cover in place whenever the continuous electrolytic process is in operation.
 - C. You must implement the applicable management practices specified in 40 CFR 63.11507(g), "What are my standards and management practices?", as practicable.
 - D. You must state in your Notification of Compliance Status that you have implemented the applicable management practices specified in 40 CFR 63.11507(g), "What are my standards and management practices?", as practicable.
- e. Pursuant to 40 CFR 63.11508(d), to demonstrate continuous compliance with the applicable management practices and equipment standards

specified in 40 CFR 63 Subpart WWWWWW, you must satisfy the requirements specified in 40 CFR 63.11508(d)(1) through (8).

- i. You must always operate and maintain your affected source, including air pollution control equipment.
- ii. You must prepare an annual compliance certification according to the requirements specified in 40 CFR 63.11509(c), "Notification, Reporting, and Recordkeeping," and keep it in a readily-accessible location for inspector review.
- iii. If you own or operate an affected electroplating, electroforming, or electropolishing tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in 40 CFR 63.11507(a), "What are my standards and management practices?", and you use a control system to comply with 40 CFR 63 Subpart WWWWWW; an affected dry mechanical polishing operation that is subject to 40 CFR 63.11507(e); or an affected thermal spraying operation that is subject to 40 CFR 63.11507(f)(1) or (2), you must demonstrate continuous compliance according to 40 CFR 63.11508(d)(4)(i) through (v).
 - A. You must operate and maintain the control system according to the manufacturer's specifications and instructions.
 - B. Following any malfunction or failure of the capture or control devices to operate properly, you must take immediate corrective action to return the equipment to normal operation according to the manufacturer's specifications and operating instructions.
 - C. You must state in your annual certification that you have operated and maintained the control system according to the manufacturer's specifications and instructions.
 - D. You must record the results of all control system inspections, deviations from proper operation, and any corrective action taken.
 - E. You must keep the manufacturer's operating instructions at the facility at all times in a location where they can be easily accessed by the operators.
- iv. If you own or operate an affected batch electrolytic process tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements of 40 CFR 63.11507(a), "What are my standards and management practices?" or a flash or short-term electroplating tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in 40 CFR 63.11507(b) and you comply with 40 CFR 63.11507(a), (b) or (c) by operating the affected tank with a cover, you must demonstrate continuous compliance according to 40 CFR 63.11508(d)(6)(i) through (iii).

- A. You must operate the tank with the cover in place at least 95 percent of the electrolytic process operating time.
 - B. You must record the times that the tank is operated and the times that the tank is covered on a daily basis.
 - C. You must state in your annual certification that you have operated the tank with the cover in place at least 95 percent of the electrolytic process time.
- v. If you own or operate an affected continuous electrolytic process tank that contains one or more of the plating and polishing metal HAP and is subject to the requirements in 40 CFR 63.11507(a), "What are my standards and management practices?" and you comply with 40 CFR 63.11507(a), (b) or (c) by operating the affected tank with a cover, you must demonstrate continuous compliance according to 40 CFR 63.11508(d)(7)(i) and (ii).
 - A. You must operate the tank with at least 75 percent of the surface covered during all periods of electrolytic process operation.
 - B. You must state in your annual certification that you have operated the tank with 75 percent of the surface covered during all periods of electrolytic process operation.
- vi. If you own or operate an affected tank or other operation that is subject to the management practices specified in 40 CFR 63.11507(g), "What are my standards and management practices?", you must demonstrate continuous compliance according to 40 CFR 63.11508(d)(8)(i) and (ii).
 - A. You must implement the applicable management practices during all times that the affected tank or process is in operation.
 - B. You must state in your annual compliance certification that you have implemented the applicable management practices, as practicable.
- f. Pursuant to 40 CFR 63.11510, if you own or operate a new or existing affected source, you must comply with the requirements of the General Provisions (40 CFR part 63, subpart A) according to Table 1 of 40 CFR 63 Subpart W (see Attachment B).
- 8a. Pursuant to 35 Ill. Adm. Code 212.306, all normal traffic pattern access areas surrounding storage piles specified in 35 Ill. Adm. Code 212.304 and all normal traffic pattern roads and parking facilities which are located on mining or manufacturing property shall be paved or treated with water, oils or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils or chemical dust suppressants shall have the treatment

applied on a regular basis, as needed, in accordance with the operating program required by 35 Ill. Adm. Code 212.309, 212.310 and 212.312.

- b. Pursuant to 35 Ill. Adm. Code 212.309(a), the emission units described in 35 Ill. Adm. Code 212.304 through 212.308 and 35 Ill. Adm. Code 212.316 shall be operated under the provisions of an operating program, consistent with the requirements set forth in 35 Ill. Adm. Code 212.310 and 212.312, and prepared by the owner or operator and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions.
 - c. Pursuant to 35 Ill. Adm. Code 212.310, as a minimum the operating program shall include the following:
 - i. The name and address of the source;
 - ii. The name and address of the owner or operator responsible for execution of the operating program;
 - iii. A map or diagram of the source showing approximate locations of storage piles, conveyor loading operations, normal traffic pattern access areas surrounding storage piles and all normal traffic patterns within the source;
 - iv. Location of unloading and transporting operations with pollution control equipment;
 - v. A detailed description of the best management practices utilized to achieve compliance with 35 Ill. Adm. Code Part 212 Subpart K (Fugitive Particulate Matter), including an engineering specification of particulate collection equipment, application systems for water, oil, chemicals and dust suppressants utilized and equivalent methods utilized;
 - vi. Estimated frequency of application of dust suppressants by location of materials; and
 - vii. Such other information as may be necessary to facilitate the Illinois EPA's review of the operating program.
 - d. Pursuant to 35 Ill. Adm. Code 212.312, the operating program shall be amended from time to time by the owner or operator so that the operating program is current. Such amendments shall be consistent with 35 Ill. Adm. Code 212 Subpart K and shall be submitted to the Illinois EPA for its review.
- 9a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- b. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the

scrubbers associated with the plating lines and the phosphate conversion line such that the scrubbers are kept in proper working condition and not cause a violation of the Illinois Environmental Protection Act or regulations promulgated therein.

- c. The scrubber shall be operated at all times when the associated plating line is in operation.
- d. This permit is also issued based upon the facility conducting only nickel, gold, tin and copper plating. Any other type of plating other than previously permitted will require a construction permit from the Illinois EPA.
- 10a. Emissions from and operation of the printed circuit board manufacturing operations shall not exceed the following limits:

<u>Equipment</u>	<u>Printed Circuit Boards</u>		<u>VOM Emissions</u>		
	<u>Boards/Mo</u>	<u>Boards/Year</u>	<u>(lb/circuit board)</u>	<u>(lb/Mo)</u>	<u>(T/Yr)</u>
Electroplating Lines	112,500	1,350,000	0.001333	150	0.90
Hot Air Leveling Etching Processes	56,250	675,000	0.0032	180	1.08
Black Hole	112,500	1,350,000	0.000667	75	0.45
Desmear Line Multi-Layer Processes	112,500	1,350,000	0.000667	75	0.45
				Total:	2.88

These limits are based on maximum production rate and emission factors provided by the applicant.

- b. Emissions from and operation of the screen printing process (including usage of LPI inks) shall not exceed the following limits:

<u>Inks & Coatings Usage</u>		<u>VOM Content</u> <u>(Wt%)</u>	<u>VOM Emissions</u>	
<u>(lb/Mo)</u>	<u>(Tons/Yr)</u>		<u>(lb/mo)</u>	<u>(Tons/Yr)</u>
2757	11.04	33.8%	932	3.73

These limits are based on maximum ink and coating usage, the maximum VOM content, and material balance.

- c. Emissions from and operation of the screen wash not exceed the following limits:

<u>Screen Wash</u>		<u>VOM Content</u> <u>(lb/Gallon)</u>	<u>VOM Emissions</u>	
<u>(Gallons/Mo)</u>	<u>(Gallons/Yr)</u>		<u>(lb/Mo)</u>	<u>(Tons/Yr)</u>
93	1095	4.5	419	2.47

These limits are based on maximum material usage, the maximum VOM content, and material balance.

- d. This permit is issued based on negligible emissions of particulate matter from dry film laminators expose and develop, UV curing ovens, electroplating lines, black oxide line, and multilayer line. For this purpose emissions from each emission source shall not exceed nominal emission rates of 0.1 lb/hour and 0.44 tons/year.
 - e. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act from this source shall not exceed 0.7 tons/month and 7.0 tons/year of any single HAP and 1.0 tons/month and 10.0 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirements to obtain a CAAPP Permit from the Illinois EPA.
 - f. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 11a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
- i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.
 - ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Condition 12 shall be performed upon a written

request from the Illinois EPA by a qualified independent testing service.

12. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
13. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.
- 14a. Pursuant to 40 CFR 63.11509(e), you must keep the records specified in 40 CFR 63.11509(e)(1) through (3).
 - i. A copy of any Initial Notification and Notification of Compliance Status that you submitted and all documentation supporting those notifications.
 - ii. The records specified in 40 CFR 63.10(b)(2)(i) through (iii) and (xiv).
 - iii. The records required to show continuous compliance with each

management practice and equipment standard that applies to you, as specified in 40 CFR 63.11508(d), "What are my compliance requirements?"

- b. Pursuant to 40 CFR 63.11509(f), you must keep each record for a minimum of 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). You may keep the records offsite for the remaining 3 years.
15. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 16a. Pursuant to 35 Ill. Adm. Code 218.187(e)(1)(B), the owner or operator of a source exempt from the limitations of 35 Ill. Adm. Code 218.187 because of the criteria in 35 Ill. Adm. Code 218.187(a)(1) shall comply with the following: On and after January 1, 2012, collect and record the following information each month for each cleaning operation, other than cleaning operations identified in 35 Ill. Adm. Code 218.187(a)(2):
- i. The name and identification of each VOM-containing cleaning solution as applied in each cleaning operation;
 - ii. The VOM content of each cleaning solution as applied in each cleaning operation;
 - iii. The weight of VOM per volume and the volume of each as-used cleaning solution; and
 - iv. The total monthly VOM emissions from cleaning operations at the source;
- b. Pursuant to 35 Ill. Adm. Code 218.187(e)(10), all records required by 35 Ill. Adm. Code 218.187(e) shall be retained by the source for at least three years and shall be made available to the Illinois EPA upon request.
- 17a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
- i. Records addressing use of good operating practices for the scrubber associated with the plating lines:
 - A. Records for periodic inspection of the scrubber associated with the plating lines with date, individual performing the inspection, and nature of inspection; and
 - B. Records for prompt repair of defects, with identification

and description of defect, effect on emissions, date identified, date repaired, and nature of repair.

- ii. Printed circuit board production (boards/month and boards/year);
 - iii. Ink and coating usage (lb/month and tons/year);
 - iv. VOM and HAP content of each ink and coating (Wt. %);
 - v. Screen Wash usage (gallons/month and gallons/year);
 - vi. Screen wash density (lbs/gallon);
 - vii. VOM and HAP content of the screen wash (Wt. %); and
 - viii. Monthly and annual emissions of PM, VOM and HAPs from the source with supporting calculations (tons/month and tons/year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
- 18a. Pursuant to 40 CFR 63.11509(b), if you own or operate an affected source, you must submit a Notification of Compliance Status in accordance with 40 CFR 63.11509(b)(1) through (3).
- i. The Notification of Compliance Status must include the items specified in 40 CFR 63.11509(b)(2)(i) through (iv).
 - A. List of affected sources and the plating and polishing metal HAP used in, or emitted by, those sources.
 - B. Methods used to comply with the applicable management practices and equipment standards.
 - C. Description of the capture and emission control systems used to comply with the applicable equipment standards.
 - D. Statement by the owner or operator of the affected source as to whether the source is in compliance with the applicable standards or other requirements.
 - ii. If a facility makes a change to any items in 40 CFR 63.11509(b)(2)(i), iii, and (iv) that does not result in a deviation, an amended Notification of Compliance Status should be submitted within 30 days of the change.
- b. Pursuant to 40 CFR 63.11509(c), if you own or operate an affected

source, you must prepare an annual certification of compliance report according to 40 CFR 63.11509(c)(1) through (7). These reports do not need to be submitted unless a deviation from the requirements of 40 CFR 63 Subpart WWWWWW has occurred during the reporting year, in which case, the annual compliance report must be submitted along with the deviation report.

- i. If you own or operate an electroplating, electroforming, or electropolishing tank that is subject to the requirements in 40 CFR 63.11507(a), "What are my standards and management practices?", and you use a control system to comply with 40 CFR 63 Subpart WWWWWW, you must state in your annual certification that you have operated and maintained the control system according to the manufacturer's specifications and instructions.
 - ii. If you own or operate an affected batch electrolytic process tank that is subject to the requirements of 40 CFR 63.11507(a) or a flash or short-term electroplating tank that is subject to the requirements in 40 CFR 63.11507(b), "What are my standards and management practices?" and you comply with 40 CFR 63.11507(a), (b) or (c) by operating the affected tank with a cover, you must state in your annual certification that you have operated the tank with the cover in place at least 95 percent of the electrolytic process time.
 - iii. If you own or operate an affected tank or other affected plating and polishing operation that is subject to the management practices specified in 40 CFR 63.11507(g), "What are my standards and management practices?" you must state in your annual compliance certification that you have implemented the applicable management practices, as practicable.
 - iv. Each annual compliance report must be prepared no later than January 31 of the year immediately following the reporting period and kept in a readily-accessible location for inspector review. If a deviation has occurred during the year, each annual compliance report must be submitted along with the deviation report, and postmarked or delivered no later than January 31 of the year immediately following the reporting period.
- c. Pursuant to 40 CFR 63.11509(d), if you own or operate an affected source, and any deviations from the compliance requirements specified in 40 CFR 63 Subpart WWWWWW occurred during the year, you must report the deviations, along with the corrective action taken, and submit this report to the Illinois EPA.
19. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.

- 20a. Pursuant to 35 Ill. Adm. Code 218.187(e)(1)(C), the owner or operator of a source exempt from the limitations of 35 Ill. Adm. Code 218.187 because of the criteria in 35 Ill. Adm. Code 218.187(a)(1) shall comply with the following: Notify the Illinois EPA of any record that shows that the combined emissions of VOM from cleaning operations at the source, other than cleaning operations identified in subsection (a)(2) of 35 Ill. Adm. Code 218.187, ever equal or exceed 226.8 kg/month (500 lbs/month), in the absence of air pollution control equipment, within 30 days after the event occurs.
- b. Pursuant to 35 Ill. Adm. Code 218.990, upon request by the Illinois EPA, the owner or operator of an emission unit which is exempt from the requirements of 35 Ill. Adm. Code 218 Subparts PP, QQ, RR, TT or 35 Ill. Adm. Code 218.208(b) shall submit records to the Illinois EPA within 30 calendar days from the date of the request that document that the emission unit is exempt from those requirements.
- 21a. If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.
- b. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

It should be noted that natural gas combustion equipment at this source is exempt from permitting, pursuant to 35 Ill. Adm. Code 201.146(d).

It should also be noted that the drilling and routing operations at this source are exempt from permitting, pursuant to 35 Ill. Adm. Code 201.146(aa).

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If you have any questions on this, please call David Hulskotter at 217/785-1705.

Raymond E. Pilapil
Acting Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

REP:DWH:

cc: Illinois EPA Region 1
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the circuit board manufacturer operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels, (e.g., 100 tons/year for VOM, 10 tons/year for any single HAP, and 25 tons/year for any combination of such HAP) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, and control measures are more effective than required in this permit.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)			
	<u>PM</u>	<u>VOM</u>	<u>Single HAP</u>	<u>Combined HAPs</u>
Electroplating Lines	0.44	0.90		
Etching Processes		1.08		
Black Hole	0.44	0.45		
Muti-Layer Processes	0.44	0.45		
Screen Printing (Inks and Coatings)	0.44	3.73		
Screen Printing (Screen Wash)		2.47		
Image Processes (dry film laminators)	<u>0.44</u>	<u>--</u>	<u>--</u>	<u>--</u>
Totals	<u>2.20</u>	<u>9.08</u>	<u>7.0</u>	<u>10.0</u>

Attachment B - Table 1 to Subpart W of Part 63—Applicability of General Provisions to Plating and Polishing Area Sources

As required in 40 CFR 63.11510, “What General Provisions apply to this subpart?”, you must meet each requirement in the following table that applies to you.

Citation	Subject
63.1 ¹	Applicability.
63.2	Definitions.
63.3	Units and abbreviations.
63.4	Prohibited activities.
63.6(a), (b)(1)–(b)(5), (c)(1), (c)(2), (c)(5), and (j)	Compliance with standards and maintenance requirements.
63.10(a), (b)(1), (b)(2)(i)–(iii), (xiv), (b)(3), (d)(1), (f)	Recordkeeping and reporting.
63.12	State authority and delegations.
63.13	Addresses of State air pollution control agencies and EPA regional offices.
63.14	Incorporation by reference.
63.15	Availability of information and confidentiality.

¹ 40 CFR 63.11505(e), “What parts of my plant does this subpart cover?”, exempts affected sources from the obligation to obtain title V operating permits.